

**BORING LOG**PROJECT  
METCALF ENERGY CENTERJOB NO.  
24193-100SHEET NO.  
1 OF 2HOLE NO.  
B-105

SITE SWITCHYARD		COORDINATES (Relocated in field to NW corner of switchyard) Approximate N 1,905,493 E 6,198,629				ANGLE FROM HORIZ. 90°		BEARING	
BEGUN 4/25/1999	COMPLETED 4/25/1999	DRILLER TREATWELL & ROLLO (PITCHER DRILLING)		DRILL MAKE AND MODEL FAILING 1500	HOLE SIZE 4 3/4	OVERBURDEN 70.0		ROCK	TOTAL DEPTH 70.0
CORE RECOVERY		CORE BOXES NONE		SAMPLES 15	EL. TOP OF CASING	GROUND EL. 251.0	DEPTH/EL. OF GWT		DEPTH/EL. TOP OF ROCK
SAMPLE HAMMER WEIGHT/FALL 140 # \ 30 INCHES				CASING LEFT IN HOLE: DIA./LENGTH NONE			LOGGED BY: KR BELL		

SAMPLE TYPE AND DIAMETER	SAMPLE ADVANCE LENGTH CORE RUN	SAMPLE RECOVERY CORE RECOVERY	SAMPLE BLOWS "N" PERCENT CORE RECOVERY	PENETRATION BLOWS			ELEVATION	DEPTH	GRAPHIC LOG	SAMPLE	DESCRIPTION AND CLASSIFICATION	NOTES ON WATER LEVEL WATER RETURN CHARACTER OF DRILLING
				1ST 6 INCHES	2ND 6 INCHES	3RD 6 INCHES						
SS	18"	10"	13	6	6	7				1	Dark brown, stiff, SILT	6" auger to 5.0'
SS	18"	4"	7	2	3	4		5		2	Dark brown, medium stiff, SILT, some clay	
SS	18"	14"	22	6	9	13	244.0			3	Dark brown, very stiff, SILT, some clay	Wash boring below 5'
SS	18"	18"	8	3	3	5		10		4	Brown and gray mottled, medium stiff, silty CLAY	
SS	18"	18"	9	3	4	5				5	Brown and gray mottled, medium stiff, silty CLAY	
ST	30"	30"						15		6	Brown and gray mottled, silty CLAY	140-240 psi push pressure
SS	18"	18"	11	3	5	6				7	Brown and gray mottled, stiff, silty CLAY	Torvane= 0.75 TSF
ST	30"	30"						20		8	Brown and gray mottled, silty CLAY	140-200 psi push pressure
SS	18"	18"	9	2	4	5				9	Brown and gray mottled, medium stiff, silty CLAY	Torvane= 0.65 TSF
								25				
SS	18"	18"	7	3	3	4				10	Brown and gray mottled, soft, silty CLAY	W.O.H. for 3"
ST	30"	30"						30		11	Brown and gray mottled, silty CLAY, trace reddish brown sand seams	160-210 psi push pressure
SS	18"	18"	12	3	5	7				12	Brown and gray mottled, stiff, silty CLAY to clayey SILT	Torvane= 0.50 TSF
								35				

SS = SPLIT SPOON; ST = SHELBY TUBE; MCS = MODIFIED CALF. SAMP  
D = DENNISON ; P = PITCHER; O = OTHERSITE  
SWITCHYARDHOLE NO.  
B-105

FIGURE 10G4-2

**BORING LOG**

PROJECT METCALF ENERGY CENTER	JOB NO. 24193-100	SHEET NO. 2 OF 2	HOLE NO. B-105
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CORE RECOVERY	CORE BOXES NONE	SAMPLES 15	EL. TOP OF CASING	GROUND EL. 251.0	DEPTH/EL. OF GWT	DEPTH/EL. TOP OF ROCK
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SAMPLE HAMMER WEIGHT/FALL 140 # \ 30 INCHES	CASING LEFT IN HOLE: DIA./LENGTH NONE	LOGGED BY: KR BELL
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SAMPLE TYPE AND DIAMETER	SAMPLE ADVANCE LENGTH CORE RUN	SAMPLE RECOVERY CORE RECOVERY	SAMPLE BLOWS "N" PERCENT CORE RECOVERY	PENETRATION BLOWS			ELEVATION	DEPTH	GRAPHIC LOG	SAMPLE	DESCRIPTION AND CLASSIFICATION	NOTES ON WATER LEVEL WATER RETURN CHARACTER OF DRILLING
				1ST 6 INCHES	2ND 6 INCHES	3RD 6 INCHES						
SS	18"	18"	12	3	5	7				13	Brown, stiff, silty CLAY, trace fine rounded gravel	Color change at top of sample
								40				
SS	18"	18"	15	3	6	9				14	Brown, stiff, silty CLAY, trace fine rounded gravel	
								45				
SS	18"	18"	41	9	16	25				15	Brown and gray mottled, hard, silty CLAY, trace fine rounded gravel	
								50				
SS	18"	18"	24	8	10	14				16	Brown, very stiff, silty CLAY, trace fine rounded gravel	
							198.0					
SS	17"	10"	71	11	21	50		55				
			11"		5"					17	Brown, hard, silty CLAY, some fine angular gravel, some zones of fine to coarse angular gravel size rock fragments (Residual soil)	
							193.0				(Very hard drilling below 58', all cuttings are rock drilling rate 8 to 9 minutes a foot, appeared to break out of rock at 61.8', took SS at that depth.)	Driller changed to rock roller bit
SS	4"	4"	100	100						18	Fractured rock in clay matrix	
			4"	4"				65			(Continued drilling below sample with rock roller bit, hard drilling to 70' at 7 to 8 minutes a foot)	
								70			Bottom of hole at 70.0 feet. Hole grouted to surface upon completion of drilling.	

SS = SPLIT SPOON; ST = SHELBY TUBE; MCS = MODIFIED CALF. SAMP D = DENNISON ; P = PITCHER; O = OTHER	SITE SWITCHYARD	HOLE NO. B-105
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FIGURE 10G4-2